

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***PERMIT STATEMENT OF BASIS***

CONDITIONAL MAJOR PERMIT, F-05-025 REV 2  
SOUTHERN GRAPHIC SYSTEMS, INC.  
7435 EMPIRE DRIVE, FLORENCE, KY 41042

DECEMBER 18, 2007

MARK LABHART, REVIEWER

SOURCE I.D. #:	021-015-00077
SOURCE A.I. #:	212
ACTIVITY #:	APE20070002

**F-05-025 REV 2**

SGS is adding a Laser Engraving operation for preparation of gravure cylinders. This will be emission point 27. The cylinders are cleaned, coated, laser engraved, followed by a chemical etching process. After etching the cylinders are cleaned a second time. There is a small amount of VOC emitted from the cleaning and coating operations. Particulate is emitted from acid cleaning and from the spray etching. A packed bed scrubber is used to control particulates from the etching process.

**F-05-025 REV 1**

Following issuance of the original draft permit, the source requested the option of demonstrating compliance with Subpart N by use of chemical fume suppressants. This option required additional monitoring and recordkeeping requirements to be added to the permit. Current regulations require a public notice / public comment period following a significant revision including a change or addition of recordkeeping and monitoring requirements. Hence the change is being processed as a significant revision even though the final permit has not been issued.

**SOURCE DESCRIPTION:**

Southern Graphic Systems manufactures flexographic printing plates and rotogravure printing cylinders. The existing equipment in Florence KY, (021-015-00077) was originally permitted to Gravure Systems with State Origin permit O-82-169. This facility was purchased by Southern Graphic in 2005. Southern Graphic Systems also owns a second facility in Dayton KY, (015-037-00092) that was not required to have a permit, (Registered Source, VOC pte < 100 tpy). With the issuance of this permit, Southern Graphic plans to consolidate operations from both facilities into the Florence location. The combined operation will have the potential-to-emit (pte), of VOC in excess of major source thresholds, however the source has taken limits to avoid the Title V process.

Flexographic plates are made by using solvent based materials to dissolve unwanted portions of the flexographic plate material, leaving the print area as a raised relief. There are (2) two such

flexographic plate making processors included in the permit. The Inline processor, has been in existence at the Florence facility. For this processor the source is proposing a change of materials. The second flexographic plate processor and related equipment are being re-located from Dayton. The Dayton processor was originally installed in 2001, following the issuance of a no-permit-required letter on June 4, 2001, (VOC pte 32 tpy).

The rotogravure cylinders are machined, engraved, and hard-chrome plated. Chrome plating is subject to the MACT regulation Subpart N. The facility also has 4 proof presses for testing the rotogravure cylinders. There are (3) existing copper plating tanks at the source. Two tanks each hold 1 cylinder and the third tank holds 2 cylinders. With this permit action the source is removing the one tank which holds 2 cylinders and is replacing this tank with 2 smaller tanks that hold 1 cylinder each. The source is also adding a manual dechrome cleaning station and a second electrolytic dechrome tank.

**COMMENTS:**

- Emission factors for the natural gas fired heating equipment are from AP-42.
- Emission estimates from facilities associated with the printing and platemaking operations are based on material balance.
- PTE for single HAP and combined HAPs are below major source thresholds.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

Southern Graphic Systems voluntarily requested limits of 50 tpy or less for VOC emissions.

**OPERATIONAL FLEXIBILITY:**

The source is not restricted as to hours of operation or quantity of product produced while remaining within the caps above.

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.